

REMARKS

I. INTRODUCTION

Applicants have amended claims 1 and 14. Claims 4-7 and 15-16 have been cancelled. Claims 1-3, 8-14, and 17-21 are presently pending in this application, although claims 18-21 have been withdrawn from consideration. Reexamination and reconsideration are hereby respectfully requested.

II. OBJECTION TO THE SPECIFICATION

The Office has objected to the Abstract, noting the use of legal phraseology often reserved for patent claims. The Abstract has been amended to remove such language. The Office has further objected to the specification because the specification included reference sign 98 that did not appear in the drawings. Reference sign 98 has been appropriately replaced in the specification by reference sign 98_a or 98_b, each of which do appear in the drawings. No new matter has been entered by these amendments. The amendments are merely conforming the specification to the drawings. Approval of the amendments is hereby respectfully requested. Reconsideration and withdrawal of the objections are hereby respectfully requested.

III. CLAIM REJECTIONS UNDER 35 U.S.C. § 102(e)

Claims 1-2 and 4-17 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Ronning et al. (U.S. 6,423,441). Claims 1 and 14 have been amended, and Applicants respectfully overcome this rejection. Claims 4-7 and 15-16 have been cancelled, and claims 18-21 have been withdrawn from consideration. Therefore, reconsideration of claims 1-3, 8-14, and 17 is requested.

Claim 1 as amended recites in part, "A battery pack, comprising: a plurality of battery modules each having at least one positive terminal and one negative terminal associated therewith, wherein at least one of said battery module terminals includes a respective tang that is integral to the terminal; and a flexible circuit . . . wherein said flexible circuit further includes windows configured to allow said tangs to pass through, wherein an edge of said window defines a hinged edge for a flap configured such that said flaps are in registry with said tangs and at least one of said battery module terminals is electrically connected to said flap via said tang." (emphasis added).

Therefore, amended claim 1 does not simply recite flaps as the connecting means between the battery module terminals and flexible circuit. Rather, claim 1 further recites that the flaps share an edge with the windows in the flexible circuit and that the flaps are in registry with the tangs of the battery module terminals. At most, Ronning et al. disclose the use of buss interfaces to connect terminals of adjacent cells and the use of blades on the buss interfaces to connect the terminals to the flexible circuit, not battery module terminal “tangs” that register with the “windows” and “flaps” defined by a common hinged edge, as positively claimed. Therefore, amended claim 1 is not anticipated by Ronning et al.

The new recitations added to amended claim 1 correspond to claims 4-7 as originally filed. In the Office Action, the Examiner stated that with respect to these claims Ronning et al. disclose a “connecting means including flat features and projecting members which are configure[d] to be connected to the battery terminals and be accommodated through channels.” Office Action, page 5. As amended, claim 1 recites in part that with respect to the battery module terminals “at least one of said battery module terminals includes a respective tang that is integral to the terminal” At most, Ronning et al. disclose the use of a projecting member called a buss blade to connect the terminals of the battery modules to the flexible circuit, not a “tang that is integral to the terminal” as positively claimed. Although the buss blades are made of electrically conductive material, they are not integral to the terminal itself, but rather a part of the buss interface used to connect the terminals of two or more battery modules.

As amended, claim 1 also recites in part “that said flaps are in registry with said tangs.” At most, Ronning et al. disclose that the buss blades are inserted into slits within the flexible circuit and that the arms of the case located below the flexible circuit deflect outwardly and exert a force against the buss blade, mechanically securing the buss blade to the flexible circuit. Ronning et al. disclose this forced fit and mechanical seal, not a seal in which the tangs are in registry with the windows and flaps of the flexible circuit as positively claimed. For all these reasons, amended claim 1 is neither anticipated nor made obvious by Ronning et al. and Applicants respectfully request reconsideration and withdrawal of the rejection.

IV. CLAIM REJECTIONS UNDER 35 U.S.C. § 102(e)

Claim 2 stands rejected under 35 U.S.C. § 102(e) as being anticipated by Ronning et al. Claim 2 depends from claim 1 directly and therefore contains all the limitations thereof. Accordingly, for at least the same reasons given above in connection with claim 1, Applicants respectfully request reconsideration and withdrawal of the rejection.

V. CLAIM REJECTIONS UNDER 35 U.S.C. § 102(e)

Independent claim 14 stands rejected under 35 U.S.C. § 102(e) as being anticipated by Ronning et al. As amended, claim 14 recites “A battery pack, comprising: a plurality of battery modules each having at least a positive terminal and a negative terminal associated therewith, wherein at least one of said battery modules comprises a plurality of individual battery units, each battery unit including at least one positive terminal and one negative terminal, wherein at least one of said battery unit terminals includes a respective tang that is integral to the terminal; and a flexible circuit configured to connect said plurality of positive and negative battery unit terminals to an output of said battery pack, wherein said flexible circuit further includes windows configured to allow said tangs to pass through, wherein an edge of said window defines a hinged edge for a flap configured such that said flaps are in registry with said tangs and at least one of said battery unit terminals is electrically connected to said flap via said tang.” (emphasis added).

Therefore, amended claim 14 does not simply recite flaps as the connecting means between the battery unit terminals and flexible circuit. Rather, claim 14 recites that the flaps share an edge with the windows in the flexible circuit and that the flaps are in registry with the tangs of the battery unit terminals. At most, Ronning et al. disclose the use of buss interfaces to connect terminals of adjacent cells and the use of blades on the buss interfaces to connect the terminals to the flexible circuit, not battery unit terminal “tangs” that register with the “windows” and “flaps” defined by a common hinged edge, as positively claimed. Therefore, amended claim 14 is neither anticipated nor made obvious by Ronning et al.

VI. CLAIM REJECTIONS UNDER 35 U.S.C. § 102(e)

Claims 5-7 and 15-16 stand rejected under 35 U.S.C. § 102(e) as anticipated by Ronning et al. Applicants overcome these rejections through cancellation of claims.

VII. CLAIM REJECTION UNDER 35 U.S.C. § 102(e)

Claim 8 stands rejected under 35 U.S.C. § 102(e) as being anticipated by Ronning et al. Claim 8 depends from claim 1 directly and therefore contains all the limitations thereof. Accordingly, for at least the same reasons given above in connection with claim 1, Applicants respectfully request reconsideration and withdrawal of the rejection.

VIII. CLAIM REJECTIONS UNDER 35 U.S.C. § 102(e)

Claims 9 and 17 stand rejected under 35 U.S.C. § 102(e) as anticipated by Ronning et al. Claim 9 depends from claim 1 directly and therefore contains all the limitations thereof. Accordingly, for at least the same reasons given above in connection with claim 1, Applicants respectfully request reconsideration and withdrawal of the rejection.

Claim 17 depends from claim 14 directly and therefore contains all the limitations thereof. Accordingly, for at least the same reasons given above in connection with claim 14, Applicants respectfully request reconsideration and withdrawal of the rejection.

IX. CLAIM REJECTIONS UNDER 35 U.S.C. § 102(e)

Claims 10-13 stand rejected under 35 U.S.C. § 102(e) as anticipated by Ronning et al. Claims 10-13 depend from claim 1 directly and therefore contain all the limitations thereof. Accordingly, for at least the same reasons given above in connection with claim 1, Applicants respectfully request reconsideration and withdrawal of the rejections.

X. CLAIM REJECTION UNDER 35 U.S.C. § 102(b)

Claims 1 and 12 also stand rejected under 35 U.S.C. § 102(b) as anticipated by Weiler (U.S. 5,999,410). Applicants respectfully overcome this rejection. Amended claim 1 recites in part, “A battery pack, comprising: a plurality of battery modules each having at least one positive terminal and one negative terminal associated therewith, wherein at least one of said battery module terminals includes a respective tang that is integral to the terminal; and a flexible circuit . . . wherein said flexible circuit further includes windows configured to allow said tangs to pass through, wherein an edge of said window defines a hinged edge for a flap configured such that said flaps are in registry with said tangs and at least one of said battery module terminals is electrically connected to said flap via said tang.” (emphasis added). Weiler, at most, discloses a circuit board comprised of copper foil and a flexible non-conductive film in which a battery pack is secured to the flexible circuit by rivets that also

create the electrical contact point (Weiler, col. 2, ll 16-18, 32-36). Therefore, Weiler discloses rivets to secure the battery module terminals to the flexible circuit, not tangs in registry with windows and flaps defined by a common edge as positively claimed. For this reason, amended claim 1 defines patentable subject matter over Weiler. Reconsideration and withdrawal of the rejection is hereby respectfully requested.

XI. CLAIM REJECTION UNDER 35 U.S.C. § 102(b)

Claim 12 stands rejected under 35 U.S.C. § 102(b) as anticipated by Weiler. Claim 12 depends from claim 1 directly and therefore contains all the limitations thereof. Accordingly, for at least the same reasons given above in connection with claim 1, Applicants respectfully request reconsideration and withdrawal of the rejection. For these reasons, claims 1-2, 9-14, and 17 define patentable subject matter over Ronning et al.

XII. CLAIM REJECTION UNDER 35 U.S.C. § 103

Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ronning et al. in view of Barker et al. (U.S. 6,063,519). Applicants respectfully traverse this rejection.

The subject matter of U.S. Patent No. 6,423,441 ("Ronning et al.") is disqualified as prior art, and shall not preclude patentability, pursuant to 35 U.S.C. § 103(c). See also MPEP 706.02(l)(1). 35 U.S.C. § 103(c) provides:

(c) Subject matter developed by another person, which qualifies as prior art only under one or more subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

At most U.S. Patent No. 6,423,441 ("Ronning et al.") would, in the absence of 35 U.S.C. § 103(c), be considered prior art only under 35 U.S.C. § 102(e). Ronning et al. was filed on January 12, 2000 and eventually issued July 23, 2002. The present application was filed on July 31, 2001. Based on these dates, Ronning et al. qualifies as prior art under only 35 U.S.C. § 102(e). That is, it is not § 102(b) prior art, nor is it § 102(a) prior art. This aspect of 35 U.S.C. § 103(c) is satisfied.

As set forth in Section XIII, Applicants are herein supplying a statement that common ownership of Ronning et al. and the claimed invention existed at the time the present invention was made. Accordingly, the rejection of claim 3 under 35 U.S.C. § 103(a) should

be withdrawn. MPEP § 706.02(l)(2) (a “statement alone is sufficient evidence to disqualify [a patent qualifying as prior art only under 35 U.S.C. § 102(e)] from being used in a rejection under 35 U.S.C. § 103(a). . .”). Ronning et al. does not constitute prior art. Accordingly, rejection of claim 3 under 35 U.S.C. § 103(a) is hereby respectfully traversed. Applicants respectfully request reconsideration and withdrawal of the rejection.

XIII. STATEMENT OF COMMON OWNERSHIP AT TIME INVENTION WAS MADE

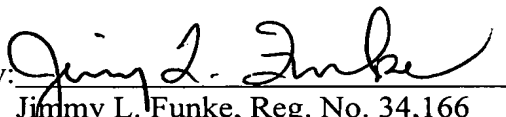
The claimed invention of the present application and U.S. Patent No. 6,423,441 were, at the time the claimed invention of the present application was made, owned by Delphi Technologies, Inc. or subject to an obligation of assignment to Delphi Technologies, Inc.

XIV. CONCLUSION

For at least the above-cited reasons, all claims pending in the present application are now believed to be allowable. Early receipt of a Notice of Allowance is hereby respectfully requested.

Respectfully submitted,

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